



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

MAY 2 2016

OFFICE OF WATER

MEMORANDUM

SUBJECT: Response to Final Report, "Drinking Water: EPA Needs to Collect Information and Consistently Conduct Activities to Protect Underground Sources of Drinking Water." GAO-16-281

FROM: Joel Beauvais
Deputy Assistant Administrator
Office of Water

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Cynthia Giles
Assistant Administrator
Office of Enforcement and Compliance Assurance

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TO: Sherri Anthony
Chief, Management Integrity and Accountability Branch
Office of the Controller

The purpose of this memo is to provide the U.S. Environmental Protection Agency's response to the findings and recommendations in the Government Accountability Office's final report, "Drinking Water: EPA Needs to Collect Information and Consistently Conduct Activities to Protect Underground Sources of Drinking Water." GAO-16-281, dated February 2016. In this report, GAO reviewed the EPA's oversight of state and EPA Class II Underground Injection Control programs (i.e., pertaining to oil and gas-related injection fluids). GAO evaluated the EPA's collection of inspection and enforcement records to determine whether the agency is conducting the oversight activities needed to assess the Class II UIC program's protection of underground sources of drinking water. The agency generally agrees with GAO's analysis and findings on the UIC Class II program as reflected in our responses.

The agency has an important role in oversight of UIC programs, and is continually working to improve its oversight to ensure protection of underground sources of drinking water. Oversight of state UIC programs is the joint responsibility of several EPA offices, including the EPA Headquarters' Office of Water and Office of Enforcement and Compliance Assurance as well as the EPA regional water program and enforcement offices. In addition to their state program oversight responsibilities, the EPA regional offices are also responsible for direct implementation of the UIC program in states that do not have primary enforcement responsibility, and in most Indian Country. Additionally, although all state UIC programs have the goal of effectively protecting underground sources of drinking water, Class II injection regulations differ by state according to their geology, hydrology and injection needs. Therefore, each state program may have requirements and solutions tailored to its individual circumstances. While GAO's investigation focused on UIC activities associated with oil and gas, the agency's efforts encompass all six well classes, including more than 650,000 injection wells, which are

overseen by 59 state agencies and the 10 EPA regional offices. Any discussion of oversight responsibilities and resource needs will be relevant to the entire UIC program.

The agency acknowledges that oversight and data management are both long-term challenges, especially in light of significant variations in state Class II programs, as allowed by the Safe Drinking Water Act. The agency is in the process of modernizing EPA's well inventory and compliance data collection, and prioritizes its oversight resources on risks to public health. The agency's oversight helps ensure that the states and tribes¹ who manage Class II UIC programs under SDWA are implementing their programs consistent with the statute and relevant state and federal UIC regulations. The statute and regulations require that Class II UIC programs permit underground injection wells in a manner that is protective of underground sources of drinking water. As noted above, the EPA regional water and enforcement programs conduct the primary oversight of state UIC programs. In addition to a significant level of informal coordination, the EPA's state UIC program oversight consists of the following efforts, conducted annually:

- Setting state/regional targets, tracking progress and reporting for EPA's National Water Program Activity Measures;
- Collecting, reviewing and confirming state UIC Annual Program Reports and well inventories;
- Collecting, reviewing and compiling compliance and enforcement reports (EPA 7520 forms);
- Developing a grant work plan with each state to target UIC program needs with funds and activities;
- Collecting and reviewing UIC program grant expenditure reporting; and
- Conducting an informal evaluation of state/tribal UIC program performance against work plan objectives and targets during the grant year to identify and resolve any performance issues.

Regional EPA UIC programs work with states to improve their UIC programs with the information collected annually through the above activities, as well as with the knowledge developed through informal exchanges, such as compliance assistance and program and policy updates. The EPA Regions also provide training, technical support and guidance to states on issues of national significance in coordination with EPA Headquarters. States develop and prioritize annual UIC activities with agency input to optimize UIC program implementation. This approach allows for frequent interaction between states and the EPA as well as the flexibility for the agency to target oversight efforts in quick response to emerging UIC issues.

As needed, regional EPA UIC programs conduct more extensive, formal evaluations of state UIC programs. Some evaluative efforts are broad in scope, covering the entire program. Other evaluations are targeted toward specific concerns such as injection induced seismicity. EPA Headquarters may participate actively in either broad or targeted evaluations. Both types of evaluations require extensive planning and coordination between the states and the agency. Some Regions incorporate compliance and enforcement into a broader program review, while others evaluate them separately, depending on how the regional water and enforcement offices are organized. Once the agency completes the review and analysis of information in concert with the state agency, the EPA prepares a document that includes recommendations, as appropriate, to help the state more effectively implement its UIC program. All of these efforts are designed to ensure regulatory safeguards are in place, and to improve implementation

¹ When referring to "states" further throughout this memo, we include the two tribes with Class II UIC primacy, the Navajo Nation and the Fort Peck Assiniboine and Sioux Tribes.

and understanding of state and EPA UIC programs across the nation. EPA agrees with GAO that having high quality data is an important part of these oversight activities. Collection of well-specific data continues to be a key goal for the agency. We will continue to work with our state partners to improve both the collection and the quality of the required data and to expand EPA's access to additional state data, rather than require the states to submit well-specific data. The agency also agrees that continued improvement in collection and consistency of data via the 7520-4 form would enhance program oversight. The agency created a standard operating procedure for 7520 forms in response to GAO's 2014² report to improve consistency in reporting. We have also finalized the revised 7520 instructions, intended to encourage consistent reporting by states and EPA Regions, and they are now available for use. We have distributed these procedures and instructions to EPA's UIC primacy programs and shared this information with states and other stakeholders at the Ground Water Protection Council's annual UIC meeting in February 2016. The agency plans to provide additional materials to states and Regions to clarify how they should complete the 7520-4 form to further ensure the information is consistent and complete.

We acknowledge that there are gaps in historical aquifer exemption information for those exemptions that were approved at the time the agency granted states UIC program primacy. However, all EPA Regions currently collect and utilize available data for their oversight activities. Headquarters is currently collecting selected elements of the available data from the Regions on approved aquifer exemptions throughout the nation. The agency plans to publically release the aquifer exemptions data set by the end of 2016. While the agency agrees that oversight is an important aspect of ensuring an effective UIC program, we do not believe that a workforce analysis is the best way to assess the resources needed to oversee the implementation of the UIC Class II program. Rather, as we stated in our response to the draft report, we will expand our current evaluation of UIC program oversight to include elements of inspection and enforcement. Once the evaluation is complete, we will look to improve the effectiveness of state and EPA UIC oversight if needed.

GAO Recommendations and EPA Response:

To help ensure protection of underground sources of drinking water from the injection of fluids associated with domestic oil and gas production, GAO recommends that EPA take four actions.

Recommendation 1: *Require and collect well-specific data on inspections from state and EPA-managed programs, including when the wells were inspected, the types of inspections conducted, and the results of the inspections in order to track progress toward state and EPA-managed annual inspection goals.*

EPA Response: As stated in EPA's response to GAO's draft report, the agency's goal is to obtain high quality data to understand program activities at the well-specific level. To that end, we are working toward establishing a complete, regularly updated data set. As a part of this effort, we will continue to explore options to improve collection of data and use of existing tools in accordance with reporting requirements, and work to expand the agency's access to well-specific inspection and enforcement data. We believe that there is a need to think carefully about instituting new reporting requirements. Such requirements could necessitate state UIC programs to direct limited resources to develop new reporting structures and additional data input, potentially reducing their capacity to conduct the important

² *Drinking Water: EPA Program to Protect Underground Sources from Injection of Fluids Associated with Oil and Gas Production Needs Improvement*, GAO-14-555 (Washington, DC: June 27, 2014)

inspection work in the states. The existing approach was developed with the input from state regulators who are knowledgeable about how the program works on a day-to-day basis, and any change in approach should continue to take advantage of state knowledge and expertise. As the agency considers future changes to the 7520 reporting forms, we will continue to work with state co-regulators to make sure that reporting is as efficient and useful as possible.

The current mechanism for required reporting from the states is the set of 7520 forms for summary information. The EPA regional direct implementation programs report well-specific data electronically through the UIC database rather than through the 7250 forms. In its previous report, GAO identified room for improvement in this collection activity and the agency has taken steps to address these gaps, including developing standard operating procedures for submission and review of the data forms and revising instructions to increase consistency in reporting the data to the EPA. As a result of these efforts, we expect improved information from future submissions to allow for better assessment of program activities.

We also continue to increase the inventory of well-specific data in our National UIC Database. We have made data collection from EPA-managed programs a priority and currently have well-specific inspection data for EPA-managed programs in all EPA Regions. Additionally, we continue to encourage state programs to share well-specific inspection data. While GAO correctly notes that the only non-EPA Class II programs currently using EPA's UIC database as their official database of record are the State of Montana and the Navajo Nation, there are other states working toward e-reporting status and we welcome and encourage further participation. Finally, we continue to work with the Ground Water Protection Council and the Department of Energy as they develop a National Oil and Gas Gateway for well-specific state data. Although the Gateway does not include inspection data, its well-specific inventory data is critical to the agency's ability to understand and help improve states' Class II primacy programs.

Recommendation 2: *Complete the aquifer exemption database and a way to update it to provide EPA headquarters and Regions with sufficient information on aquifer exemptions to oversee state and EPA-managed programs.*

EPA Response: EPA Headquarters is engaged in an effort to collect, standardize and centralize data regarding aquifer exemption boundaries and other key data from the EPA regional offices. The agency initiated this effort to better understand the number, locations and nature and quality of aquifers exempted by the UIC program. Our intent is also to share key information with the public to improve transparency. The EPA regional offices, as the final approving authority for aquifer exemptions, hold a comprehensive data set on aquifer exemptions for states in their Region.

We expect to release a public version of the data set by the end of 2016, which will include data current through 2015, with the exception of Region 9's data for the State of California. The public data set will show the approved aquifer exemption boundaries in two dimensions as well as information such as depth of injection, surrounding geology and injectate characteristics. We anticipate adding Region 9's aquifer exemption data for California as the Region works with the state to clarify the boundaries of the agency's historic approvals and takes action on the state's requests for new exemptions. EPA plans to update the central public data set annually, and the Regions will continue to hold the most current data. The primacy agency must provide public notification and an opportunity for a public hearing on all new requests for aquifer exemptions before the exemption may be approved by the agency. This provides the

public with the ability to obtain information about new aquifer exemptions from the EPA Regions between annual updates of the national data set.

Recommendation 3: *Clarify guidance on what data should be reported on the 7520-4 form to help ensure that the data collected are complete and consistent across state and EPA-managed programs and to provide the information EPA needs to assess whether to take enforcement action.*

EPA Response: The 7520-4 form is used to track specific wells in significant non-compliance, which a primacy program has not addressed with an enforcement action or that have not returned to compliance for two or more quarters. The agency agrees that the form is a tool for obtaining important information used in assessing enforcement activities and that providing guidance on the 7520-4 could be valuable to improve the quality of information the agency receives. The current 7520 standard operating procedures that the EPA created in response to GAO's previous report reminds reviewers that wells in significant non-compliance for two or more quarters should remain listed on the 7520-4 until the issue is resolved. This procedure was established to address an area where reporting has been inconsistent. The agency will provide further materials to UIC data submitters, to improve completeness and consistency of the data a UIC program reports on form 7520-4, within six months of GAO's final report.

Recommendation 4: *EPA should conduct a workforce analysis to identify the human capital and other resources EPA needs to carry out its oversight of state and EPA-managed programs.*

EPA Response: The EPA agrees that oversight is an important aspect of ensuring an effective UIC program; however, EPA does not believe that a workforce analysis is necessary to better assess the resources needed to oversee the implementation of the UIC Class II program. In response to GAO's previous report, we are working with the UIC program managers to evaluate the effectiveness of our current oversight activities. The agency maintains that the best approach is to expand this evaluation to include elements of inspection and enforcement. Once the evaluation is complete, we will look to improve the effectiveness of state and EPA UIC oversight if needed. For example, a viable opportunity for enhanced oversight might include piloting a project that would explore the potential to assure program implementation by use of remote approaches for data collection and analysis, utilize resources more efficiently through targeting and priority ranking, and improve public transparency.

In closing, the agency generally agrees with GAO's analysis and findings on the UIC Class II program as reflected in our responses. If you have any questions, please contact Holly Green at (202) 566-0651 or Gwendolyn Spriggs at (202) 564-2439.

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